

Interview Summary	Application No. 10/691,811	Applicant(s) DATH ET AL.	
	Examiner Jonathan Johnson	Art Unit 1725	

All participants (applicant, applicant's representative, PTO personnel):

(1) Jonathan Johnson.

(3) Dr. Jean-Pierre Dath.

(2) Shirley Kopecky.

(4) Dr. Kevin Kelly.

Date of Interview: 09 March 2006.

Type: a) ☐ Telephonic b) ☐ Video Conference
c) ☒ Personal [copy given to: 1) ☒ applicant 2) ☒ applicant's representative]

Exhibit shown or demonstration conducted: d) ☒ Yes e) ☒ No.
If Yes, brief description: 98

Claim(s) discussed: 19-21, 23-26 and 29.

Identification of prior art discussed: WO 97/04871, US 5,242,676.

Agreement with respect to the claims f) ☐ was reached. g) ☒ was not reached. h) ☐ N/A.

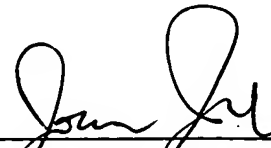
Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Applicants submit that their proposed amendment overcomes the rejection of record because, inter alia, the prior art does not teach the newly claimed atomic ratio or the production of ethylene and propylene from C4 to C10 olefins. The examiner will take applicants' arguments under consideration when issuing the next office action.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Attachment: Proposed Amendment

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.


Examiner's signature, if required

10/691811

Proposed

~~Examiner Johnson~~
Amendment

~~REMOVED~~

AMENDMENTS TO THE CLAIMS

Claims 1-18 (Cancelled)

19. (Currently Amended) A process for producing a catalyst for olefin cracking, the

processing comprising the steps of:

_____ providing an MFI-type crystalline silicate catalyst;

_____ formulating said MFI type crystalline silicate catalyst with a binder comprising silica to produce catalyst particles in a formulation of said MFI type crystalline silicate and silica binder;

_____ heating the catalyst in steam to remove aluminum from the crystalline silicate framework;

~~and~~ extracting aluminum from the catalyst by contacting the catalyst with an aluminum complexing agent ~~for aluminum~~ to remove aluminum from pores of the framework ~~aluminum~~ deposited therein during the steaming step thereby to increase the silicon/aluminum atomic ratio

of the catalyst;

~~and~~ calcining the catalyst at elevated temperature;

_____ ~~formulating said MFI type crystalline silicate catalyst with a binder comprising silica to produce catalyst particles in a formulation of said MFI type crystalline silicate and silica binder~~

_____ wherein said MFI crystalline silicate catalyst is formulated with said silica binder to produce said catalyst particles prior to heating said catalyst in steam to remove aluminum from the crystalline silicate catalyst framework and extracting aluminum from the pores of the catalyst

framework; and

wherein said MFI crystalline silicate catalyst at the conclusion of the steaming and extraction of aluminum has a silicon/aluminum atomic ratio of at least 120.

20. **(Currently Amended)** The process of claim 19 wherein said silica is employed in an amount to provide catalyst particles of said silica binder and said MFI type crystalline silicate catalyst containing ~~at least 20% silica~~ ^{about} and where steaming and extraction occurs before binding.

21. **(Currently Amended)** The process of claim 20 wherein said silica binder is present in an amount of about 50 wt.%, and where steaming and extraction occurs after binding.

22. **(Cancelled)**

23. **(Currently Amended)** A process for producing an olefin cracking catalyst to produce ethylene and ~~propylene~~ from C₄ to C₁₀ olefins comprising:

(a) providing an MFI type crystalline silicate catalyst containing aluminum and silicon in the catalyst framework to provide an initial silicon/aluminum atomic ratio;

(b) formulating said crystalline silicate catalyst with a silica binder to produce catalyst particles containing said MFI crystalline silicate and silica binder;

(c) subsequent to the formation of said MFI crystalline silicate-binder catalyst particles, subjecting said catalyst particles to steaming to remove aluminum from the framework of the crystalline silicate catalyst;

(d) thereafter dealuminating said catalyst by treating said catalyst particles with a complexing agent for aluminum to remove aluminum by extraction from the pores of said catalyst ~~during the steaming step~~ ^{to} and provide a silicon/aluminum atomic ratio greater than said initial silicon/aluminum atomic ratio; ~~and~~

(e) calcining said catalyst particles at an elevated temperature;

(f) wherein said catalyst is used to produce ethylene and ~~poly~~propylene from C₄ to C₁₀ olefins.

24. **(Currently Amended)** The process of claim 23 wherein said MFI crystalline silicate catalyst at the conclusion of the steaming and extraction of aluminum has a silicon/aluminum atomic ratio of at least 180.

25. **(Currently Amended)** The process of claim 23 wherein said MFI crystalline silicate catalyst at the conclusion of the steaming and extraction of aluminum has a silicon/aluminum atomic ratio of at least 300.

26. **(Currently Amended)** A process for producing an olefin cracking catalyst comprising:

providing an MFI type crystalline silicate catalyst containing aluminum and silicon in the catalyst framework to provide an initial silicon/aluminum atomic ratio;

formulating said crystalline silicate catalyst with a silica binder to produce catalyst particles containing said MFI crystalline silicate and silica binder;

subsequent to the formation of said MFI crystalline silicate-binder catalyst particles, subjecting said catalyst particles to steaming to remove aluminum from the framework of the crystalline silicate catalyst;

thereafter dealuminating said catalyst by treating said catalyst particles with a complexing agent for aluminum to remove aluminum by extraction from the pores of said catalyst ~~during the steaming step~~ and provide a silicon/aluminum atomic ratio greater than said initial silicon/aluminum atomic ratio;

26-calcining said catalyst particles at an elevated temperature; and

~~The process of claim 23~~ wherein said MFI crystalline silicate catalyst is a catalyst of the ZSM-5 type having an orthorhombic structure which prior to the steaming and extracting procedure, had a silicon/aluminum atomic ratio of less than 80, and after steaming ^{and extraction} has a silicon/aluminum atomic ratio of more than 120 and a monoclinic structure.

29. (New) The process of claim 26 where the crystallite size of the monoclinic crystalline silicate 1 micron or less.

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